

# **LAB-1600 BELT DRIVE LINEAR-TRACKING AUTOMATIC TURNTABLE**

PLEASE READ BEFORE USING THIS EQUIPMENT



**REALISTIC<sup>®</sup>**



Your new **REALISTIC®** LAB-1600 Belt Drive Linear-Tracking Automatic Turntable uses the latest in audio technology to give the superior sound reproduction audiophiles demand.

With the new drawer-type cabinet, the dust cover is eliminated. It is the ideal complement for your electronic system. In an area of limited space, it provides easy access to your records.


The logic-controlled linear tracking keeps the stylus of the cartridge at the correct angle to the radius of the groove over the full surface of the record — in the same way that the cutting machine produced the grooves on the original metal discs from which your records are made.

The Turntable comes complete with plug-in connector type Realistic/Audio Technica Dual Magnet type cartridge with 0.4 x 0.7 mil diamond stylus that reproduces frequencies between 20 — 20,000 Hz while maintaining superior channel separation.


For safekeeping, we urge you to record the serial number of your unit in the space provided. You'll find the serial number on the rear of your unit.

Serial Number\_\_\_\_\_

**WARNING:** To prevent fire or shock hazard, do not expose this appliance to rain or moisture.



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure.



The exclamation point within an equalateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

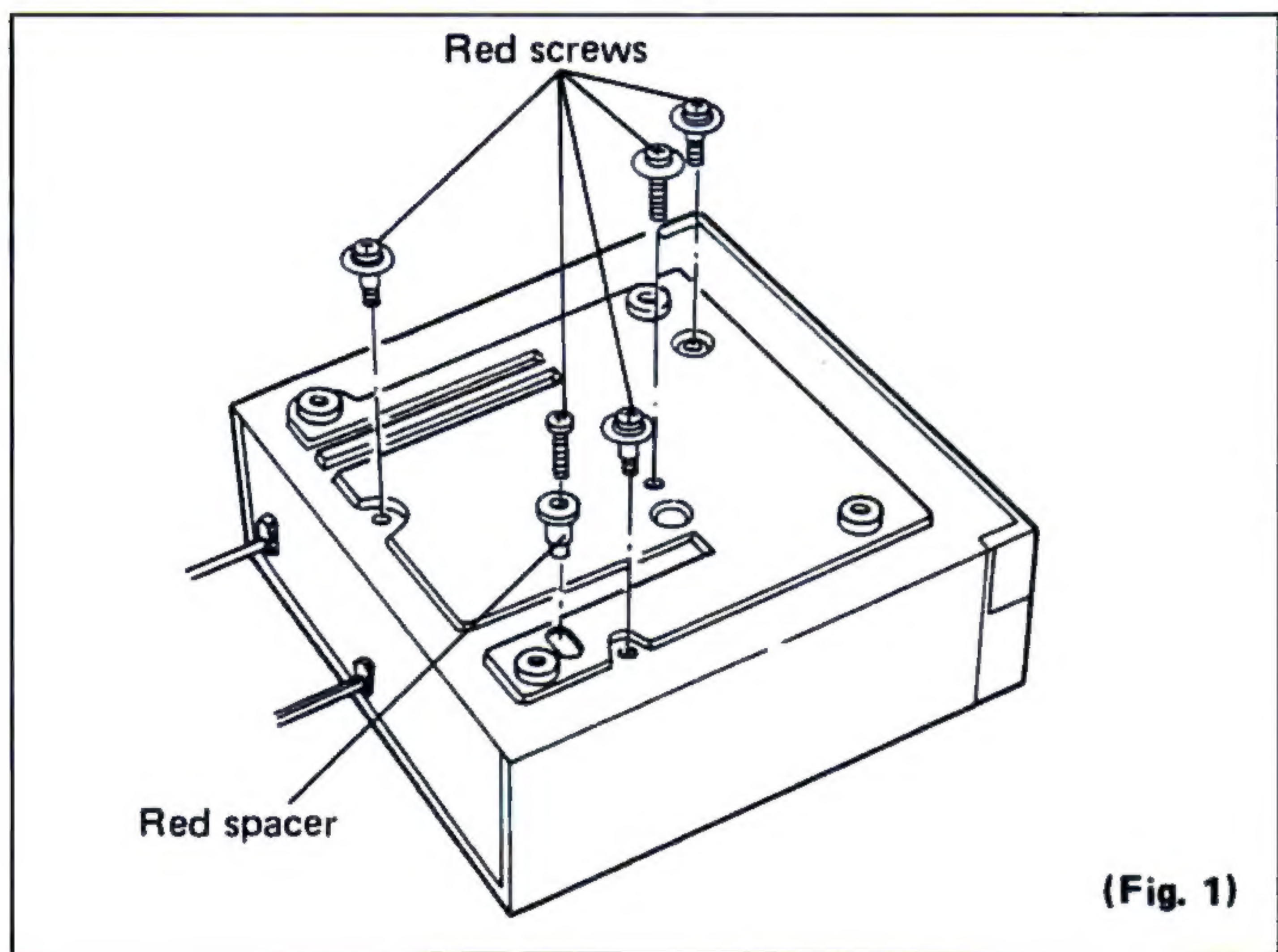


# UNPACKING AND PREPARING FOR USE

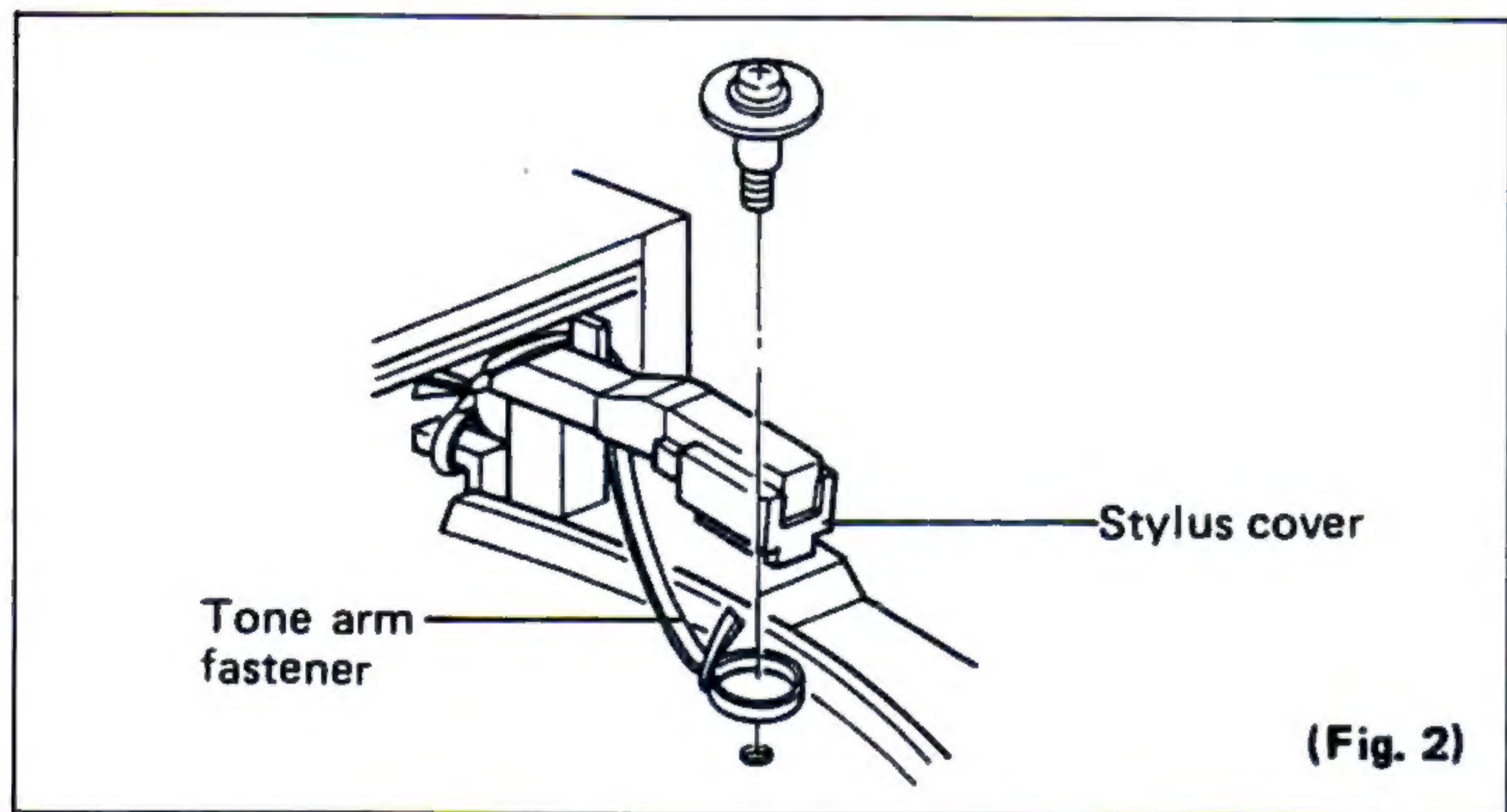
Take out the platter pad, belt and rubber mat on the top of the packing. Carefully remove the turntable assembly (with its styrofoam protectors) from the carton. Remove the bag with accessory parts. Remove all protective packaging from parts. Keep all packing materials, so you can carefully pack up components for safe transit future shipping.

## INSTALLATION

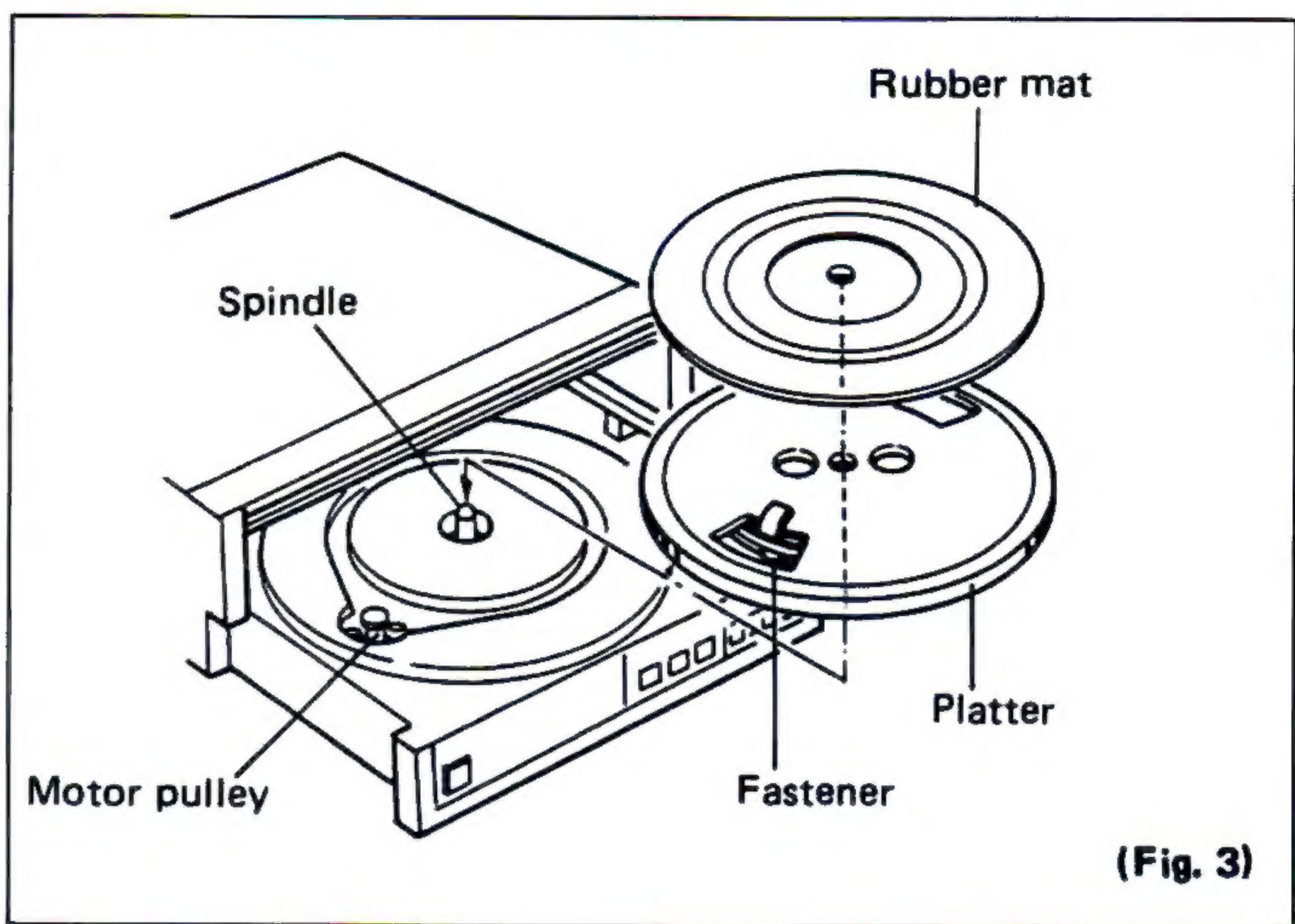
1. Turn the unit upside down. Remove the five red screws and spacer from the bottom. Restore the unit to the normal position (Figure 1).



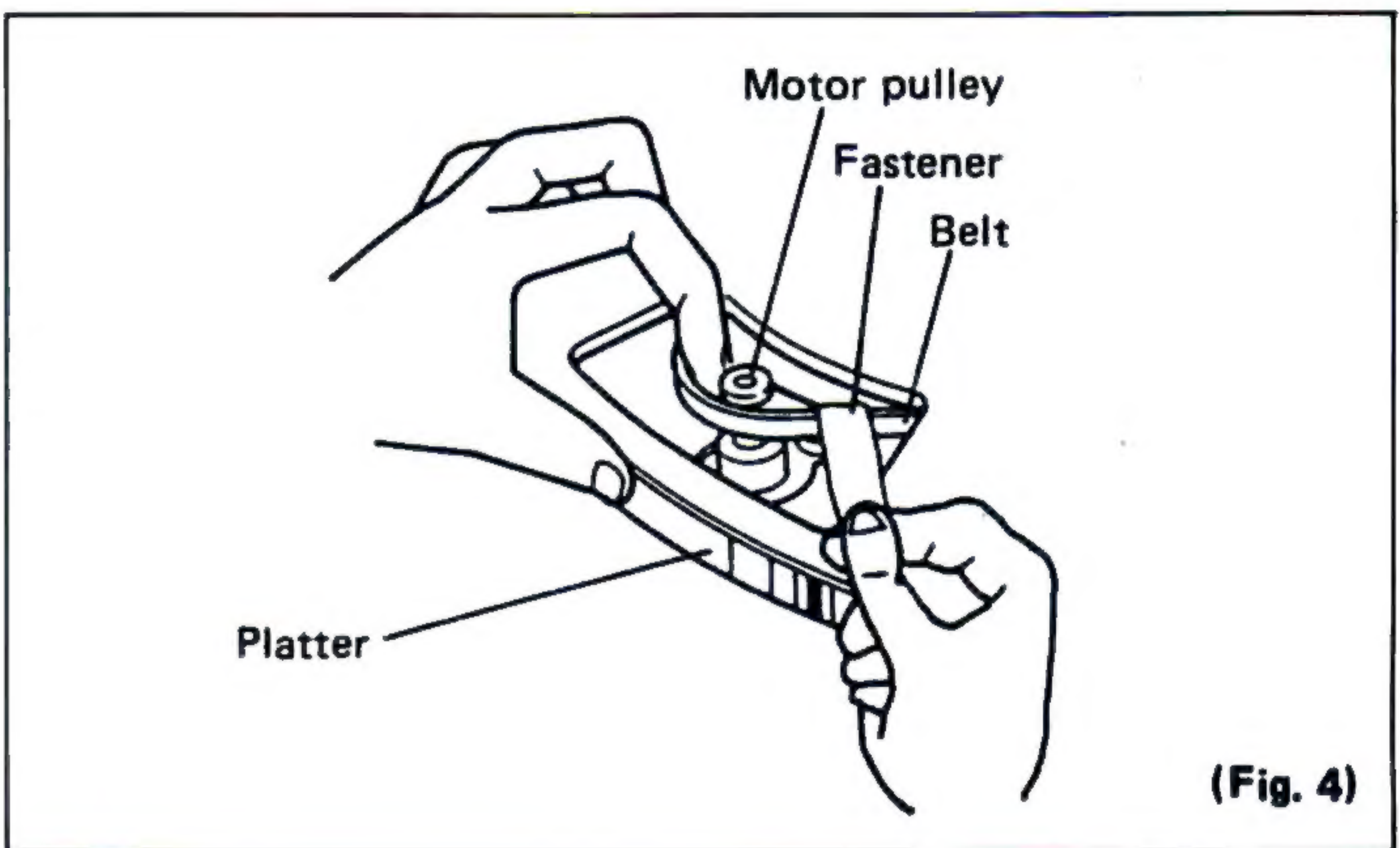
2. Gently pull out the turntable drawer. Remove the red screw next to the tone arm and untie the tone arm fastener (Figure 2).



3. Carefully lower the turntable platter onto the motor spindle.
4. There is a piece of wire attached to the turntable belt. Slowly turn the platter clockwise until the motor pulley is centered in the large opening on the platter containing the wire (Figure 3).



5. To prevent natural skin oils contaminating the belt, use the wire to stretch the belt enough to slip it over the motor pulley as in Figure 4. Once the belt is in place, discard the wire.



6. Set the rubber mat on the platter.
7. If you are going to use a 45-rpm record, place the 45-rpm adapter supplied over the spindle.

There is no need for counterweight adjustment or anti-skate adjustment.

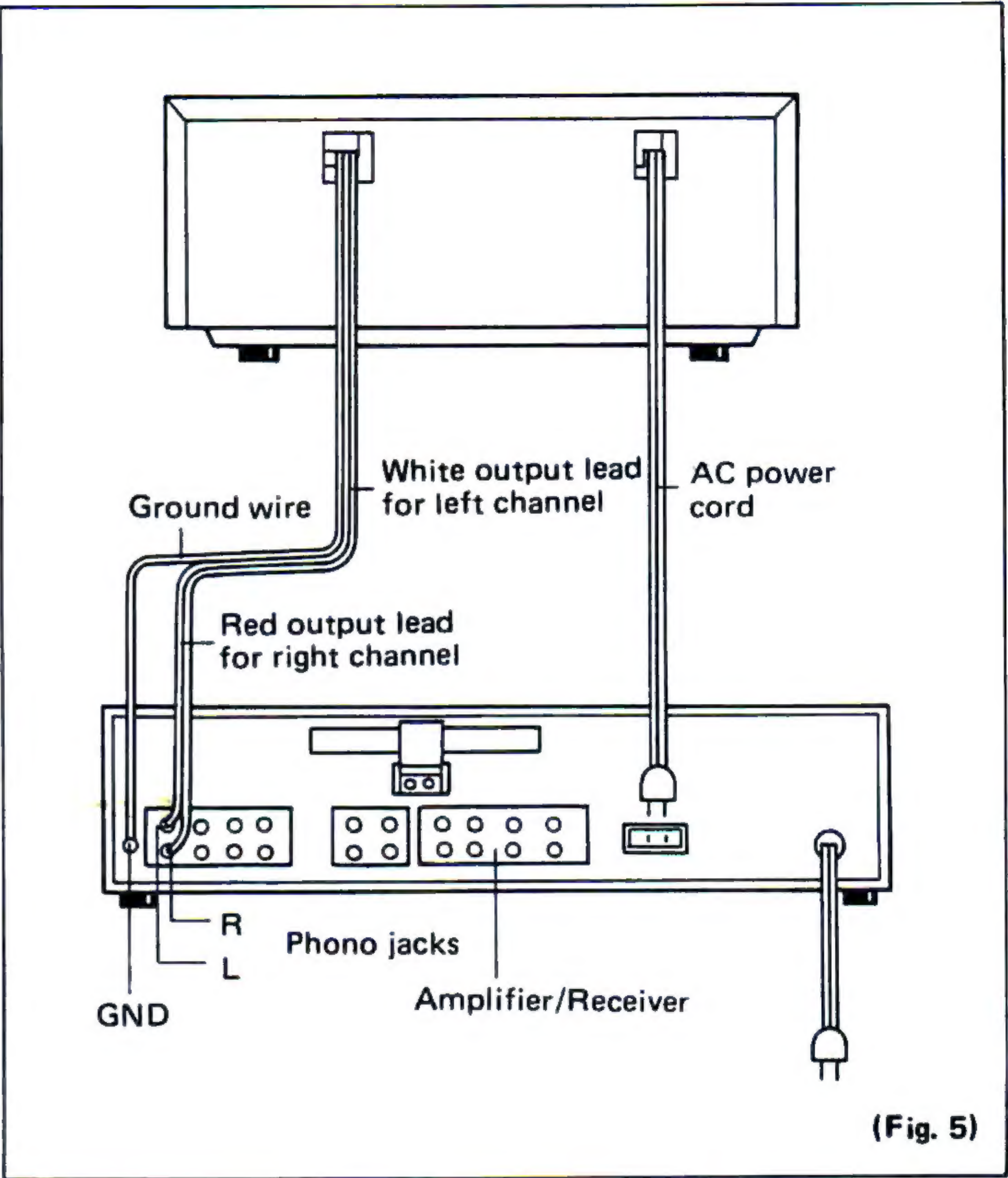
**Caution:** Do not turn the turntable platter counterclockwise.

To ensure top performance, install only on a solid surface, free from vibration. Avoid direct sunlight or other sources of heat (radiators, hot air vents, etc.). Avoid areas of high humidity. And always remember that good air circulation is very important.

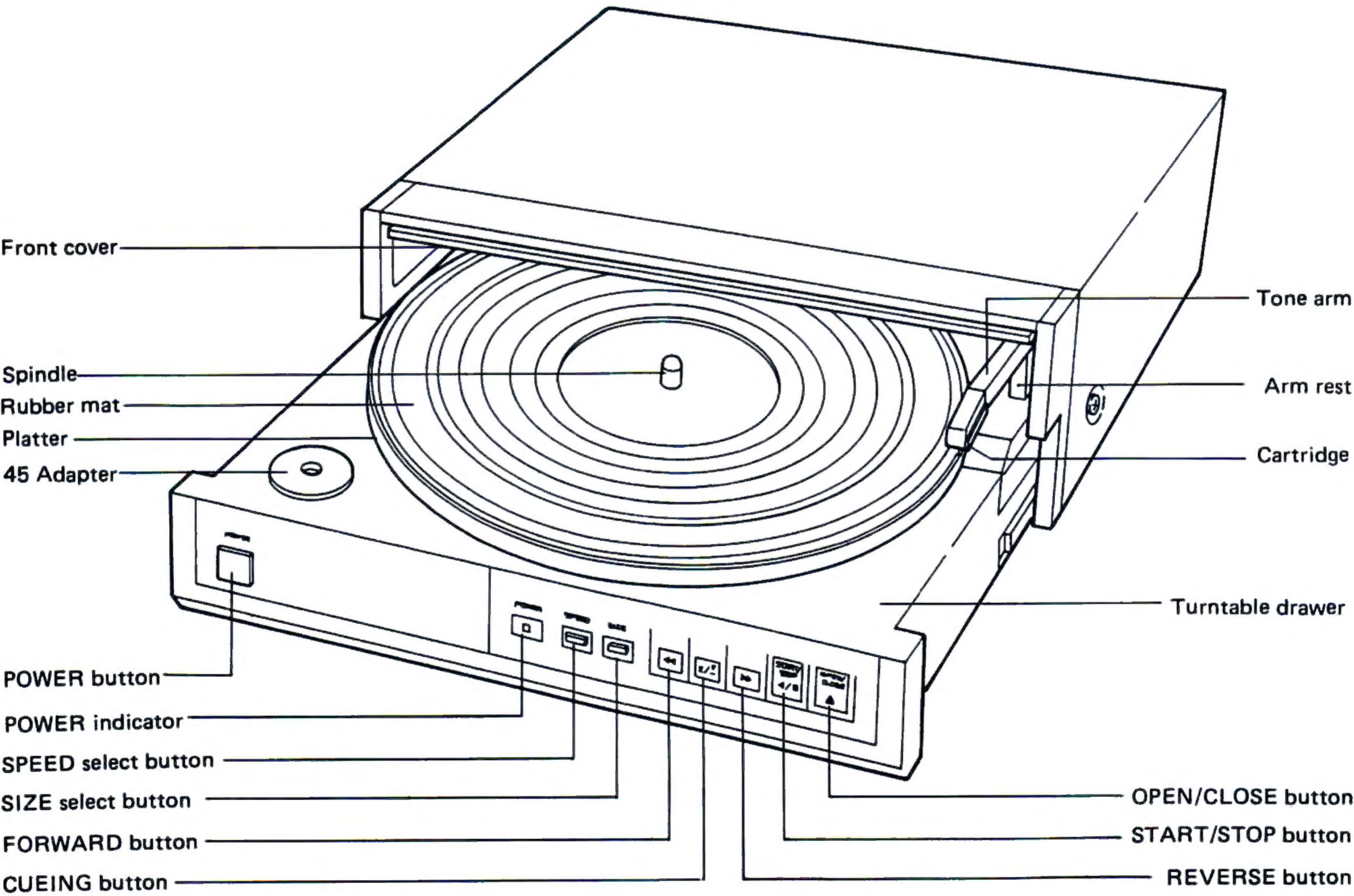


# ELECTRICAL CONNECTIONS

- 1. Output leads with RCA type phono plugs:**  
Connect the leads (L and R) coming from the rear of the turntable to the phono (magnetic) input jacks of your amplifier/receiver – red for right channel and white for left channel.
- 2. Ground wire:**  
Connect the ground wire to the phono ground terminal on your amplifier/receiver. This will reduce or eliminate hum.
- 3. AC power cord:**  
Plug the AC power cord coming from the rear of the Turntable into a convenient source of AC power.



# CONTROLS



(Fig. 6)



# OPERATION

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Before operating the LAB1600, be sure to remove the protective cover from the stylus.

## Automatic Play

1. Press the POWER button. The POWER indicator lights up.
2. Press the OPEN/CLOSE button. The turntable drawer gradually moves out.
3. Place a record on the platter. When playing a 45-rpm record with large center opening, place the supplied adapter over the turntable shaft.
4. Set the SPEED select switch and SIZE select switch at the correct positions.
5. Press the OPEN/CLOSE button to close the drawer.

**Note:** If you wish you can operate the Turntable with the drawer open.

6. Press START/STOP. The tone arm moves to the starting position on the record and then slowly lowers the stylus.

**Caution:** Never press START/STOP button when no record is placed on the platter. The tone arm automatically descends to platter and stylus may be damaged.

7. The tone arm can be lifted from the record at any time during the playing cycle, by pressing the CUEING button. Press CUEING again to resume play.
8. You can move the tone arm to different positions on the record by first pressing CUEING to lift the arm, and then pressing the FORWARD or REVERSE button. The tone arm lifts and moves in the direction you select. Press CUEING to lower the tone arm for continued record play.
9. At the end of the record, the tone arm automatically returns to the arm rest, and the Turntable stops.
10. To stop playing before the end of a record, push the START/STOP button. The tone arm returns on the arm rest, and the Turntable shuts off.

## Manual Play

1. Press the POWER button. The POWER indicator lights up.
2. Press the OPEN/CLOSE button. The turntable drawer will gradually come out.
3. Place a record on the platter. When playing a 45-rpm record with large center opening, place the supplied adapter over the turntable shaft.

4. Set the SPEED select switch and SIZE select switch at the correct positions.
5. Press the OPEN/CLOSE button to close the drawer.

**Note:** If you wish you can operate the Turntable with the drawer open.

6. Press FORWARD to move the tone arm to the position you want to play. If it moves too far, use REVERSE.
7. Press CUEING. The tone arm descends and starts the playing of the record.
8. To lift the tone arm from the record at any time during the playing cycle, press the CUEING button. Press CUEING again to resume play.
9. At any time during play cycle, the tone arm can be lifted from the record by pressing the CUEING button. Press the CUEING button again to resume play.
10. You can move the tone arm to different positions on the record by first pressing CUEING to lift the arm, and then pressing the FORWARD or REVERSE button. The tone arm lifts and moves in the direction you select. Press CUEING to lower the tone arm for continued record play.
11. At the end of the record, the tone arm automatically returns to the arm rest, and the Turntable stops.
12. To stop playing before the end of a record, push the START/STOP button. The tone arm returns to the arm rest, and the Turntable shuts off.

## TIPS AND TECHNIQUES

1. When the tone arm is moving automatically, do not touch it.
2. If your collection includes 10-inch records, set the SIZE select switch at 12 and you must move the tone arm to the outer edge of the record by pressing the FORWARD button. Do not use START/STOP button. When the tone arm reaches the desired position, press CUEING to lower the tone arm.
3. You can play records with the drawer opened or closed. If you should press OPEN/CLOSE while playing a record with the drawer open . . .
  - the tone arm lifts
  - the drawer closes
  - the tone arm descends and the record automatically continues to play from point of interruption.



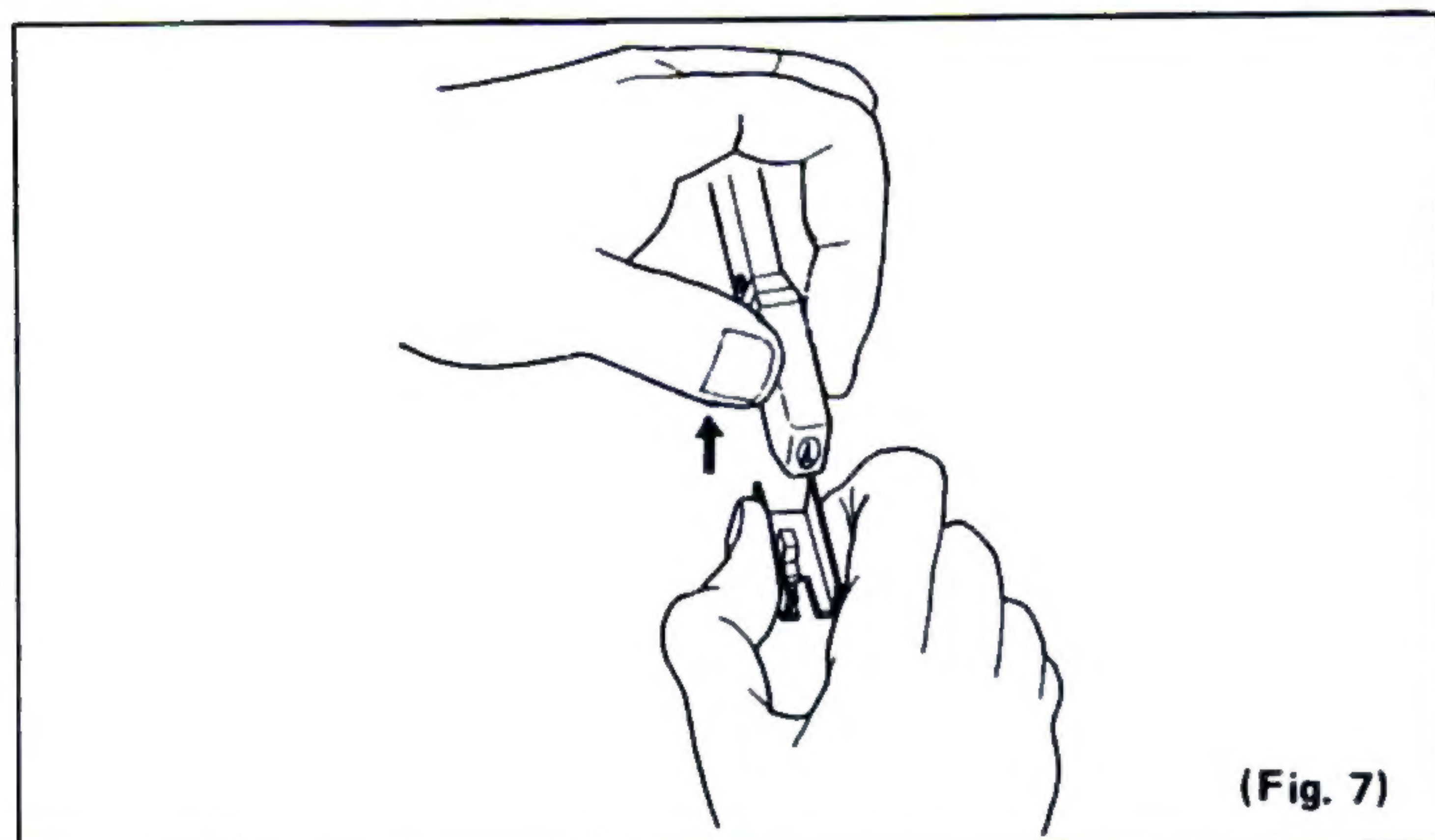
But if you press OPEN/CLOSE while playing a record with the drawer closed . . .

- the tone arm lifts
  - the drawer opens
  - the Turntable continues to rotate
  - the tone arm remains in the lifted position
- In this instance, you must press CUEING for the tone arm to return to the record so that playing may be resumed.

4. If you lift the tone arm with CUEING and leave it in the lifted position for over three minutes, the tone arm automatically returns to the arm rest.
5. When the power is cut off while the drawer is open, the player stops and the tone arm remains on the record. When the power is restored, the tone arm returns to the arm rest and the drawer closes.
6. If, after the tone arm has reached the innermost groove of a record, you inadvertently push the FORWARD button, the tone arm will remain in position. You then must press CUEING to return the tone arm to the arm rest.

## REPLACEMENT OF STYLUS

With proper care, a diamond stylus is durable and gives you long hours of satisfactory record play. However, any stylus ultimately shows signs of wear. If the sound becomes noisy, the stylus probably needs replacing. Pull the stylus straight down from the cartridge. Insert the new stylus from the underside of the cartridge (Figure 7).

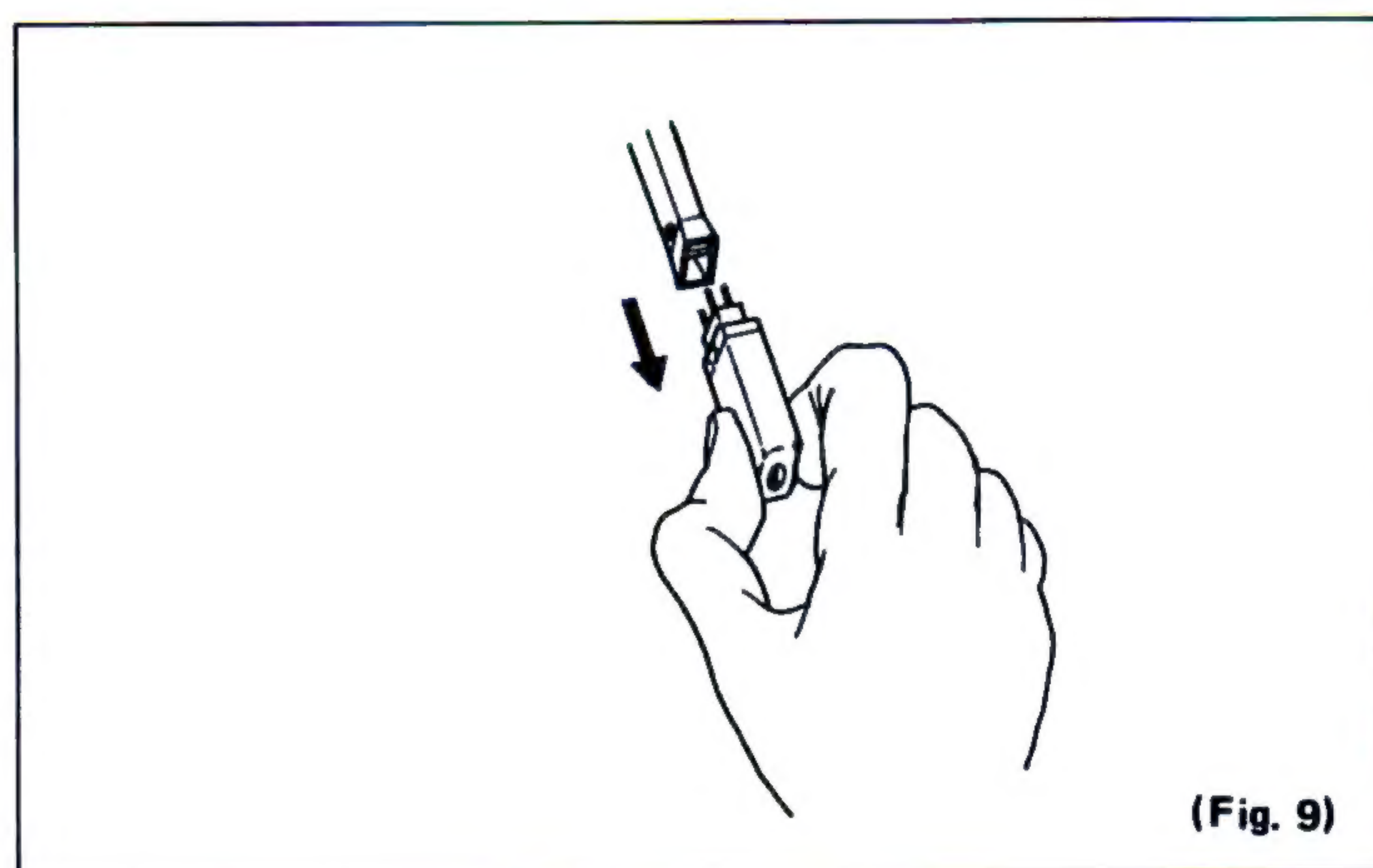
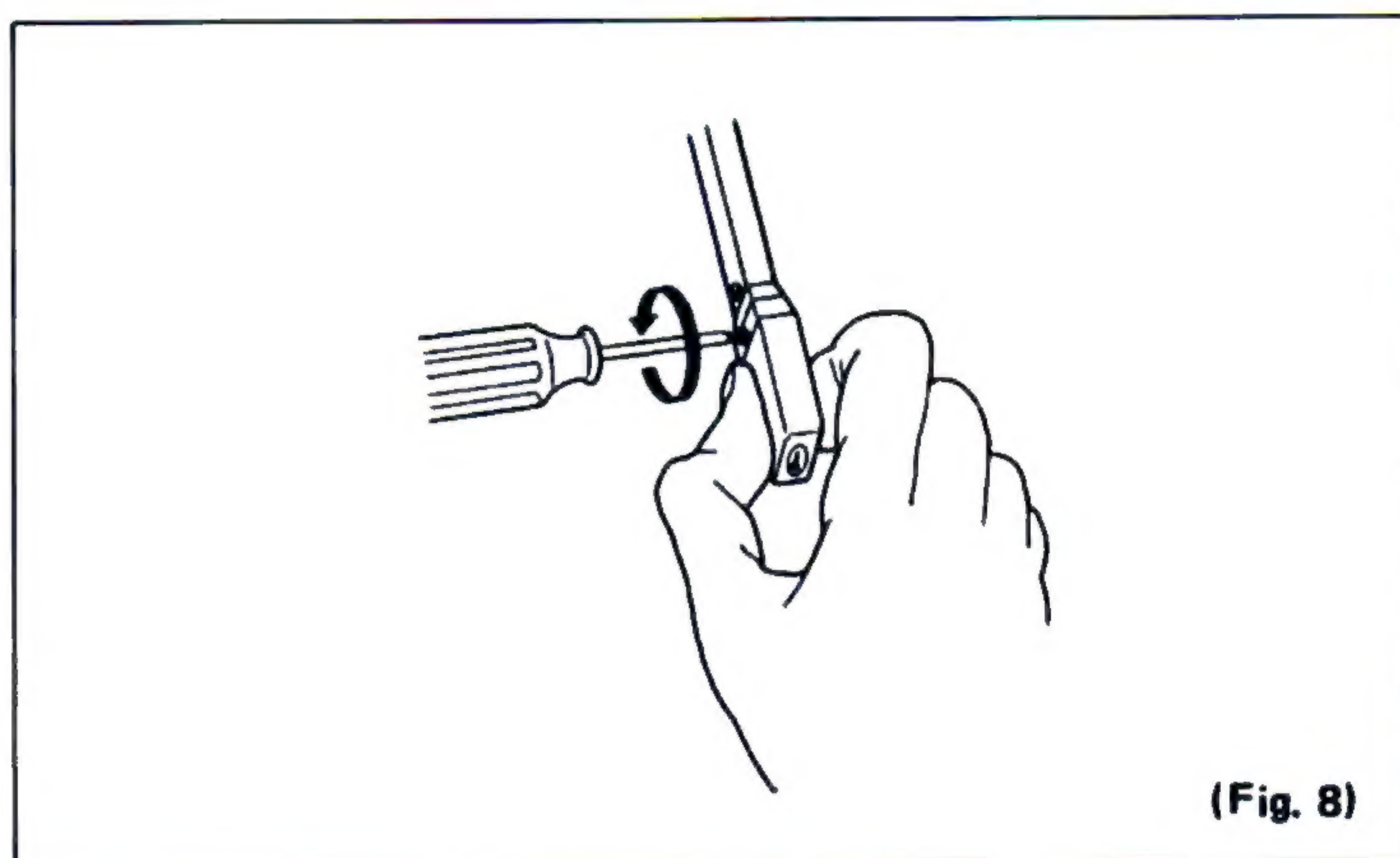


## REPLACEMENT OF CARTRIDGE

1. Remove the screw that holds the cartridge with a small screwdriver (Figure 8). Hold the tone arm and gently pull out the cartridge (Figure 9).
2. Align the pins in the new cartridge with the holes in the tone arm. Keep the pins straight and insert them all the way into the holes. Replace the screw and tighten.

All plug-in type cartridges are designed under the same conditions. No counterweight adjustment or anti-skate adjustment is necessary.

3. The Turntable is ready to be returned to the closed position, or is ready for play depending on the circumstances.





# HINTS FOR BETTER SOUND

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## Howling

Cartridges are sensitive and may pick up slight sound pressure or vibrations of the speaker coming along the floor or through the air. This results in howl. Therefore, location of your Turntable is important. Find a location where it will be stable and free from vibration.

## Induction Hum

Do not place the Turntable near a product in which a motor or transformer is used. To prevent the Turntable from being affected by the power transformer of your power amplifier, receiver or tape deck, place the Turntable on the side opposite the power transformer. You may have to experiment a bit to find the best location for your Turntable.

## Record Care

When handling a record, always hold it by its edge and center label area. Never touch the grooves of the record. Natural body oils and even miniscule particles of dust can harm the record. Make it a habit to return records to their jackets immediately after use. Store the records in a vertical position and protect them from extremely high and low temperatures, high humidity and direct sunlight.

# MAINTENANCE

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## 1. Dust

Playing a dirty record grinds dust into the grooves and wears the record (and the stylus) out quickly. Records often carry dust-attracting static charges and should be cleaned before use. Occasionally you need to remove dust and dirt from the stylus to reduce record wear and maintain top performance. Your local Radio Shack store has a complete line of quality record care accessories.

## 2. Cabinet

If the cabinet needs cleaning, use a soft, damp cloth (do not use solvents). Don't use insecticide, benzine or thinner near the cabinet.



# SPECIFICATIONS

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Drive system:	Belt drive system
Drive motor type:	DC servo controlled motor
Turntable speeds:	2 speed (33-1/3 and 45 rpm)
Turntable platter:	298mm aluminum alloy diecast
Tone arm:	Static balanced Linear-Tracking tonearm Effective length: 140mm
Cartridge:	Dual-Magnet Output voltage: 3.5mV at 1 kHz at 3.54/cm Frequency response: 20 – 20,000 Hz Channel balance (1 kHz): < 2.5 dB Crosstalk (1 kHz): > 18 dB Load resistance: 47K ohm Stylus tip: Elliptical diamond 0.4 x 0.7 mil Dynamic compliance (lateral): 8mm/N Tracking force: 1 – 1.5 g Stylus replacement: AT-102EP
Wow and flutter:	WRMS: less than 0.08%
Rumble:	DIN A: lower than –35 dB DIN B: lower than –60 dB
Power requirement:	AC 120V ~ 60 Hz (For U.S.A.) AC 220/240V ~ 50 Hz (For Europe/Australia)
Power consumption:	9 watts
Major dimensions:	340(W) x 112.5(H) x 350(D) mm (in the loading closed state) 340(W) x 112.5(H) x 520(D) mm (in the loading opened state)
Weight:	Approx. 5.9 kg
Features:	Electronically controlled fully automatic functions (automatic lead-in, automatic stop, automatic return, cueing, manual) Open/close loading mechanism
Accessory:	45 rpm record adaptor

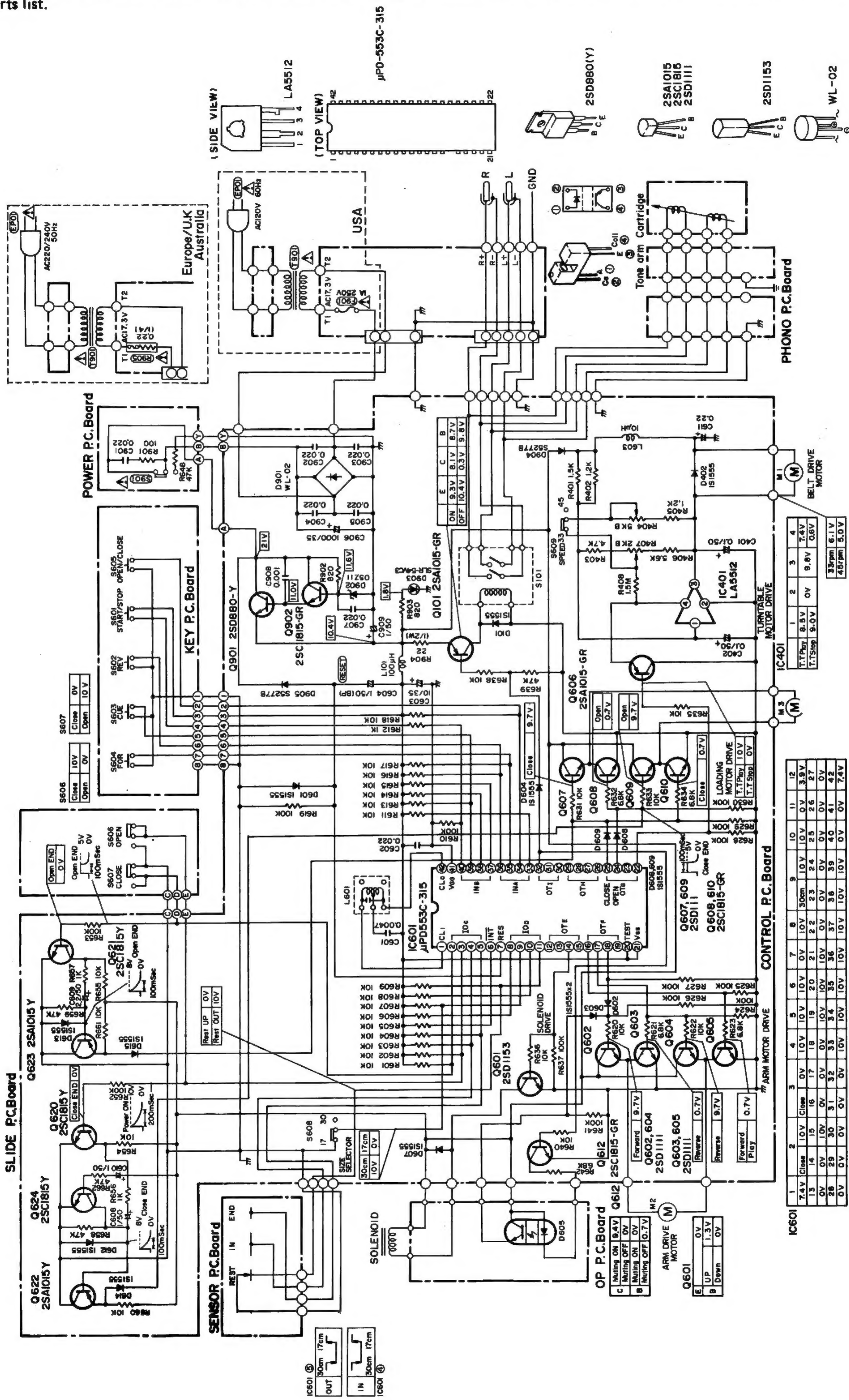
Subject to alteration without notice.

For most accurate Schematic (and parts) contact Radio Shack, National Parts Dept., Fort Worth TX76101.  
In UK, contact Tandy Electronics, National Parts Dept., Bilston Road, Wednesbury, West Midlands WS10 7JN.  
In Australia, contact Tandy Australia Limited, National Parts Dept., 91 Kurrajong Avenue Mount Druit, N.S.W. 2770.



SCHEMATIC DIAGRAM

**CAUTION:**  
The  mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.







**CUSTOM MANUFACTURED FOR RADIO SHACK  
A DIVISION OF TANDY CORPORATION**

**U.S.A.: FORT WORTH, TEXAS 76102  
CANADA: BARRIE, ONTARIO L4M 4W5**

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